The reverse question mark incision has been traditionally utilized to perform decompressive hemicraniectomy (DHC) to relieve refractory intracranial hypertension. Alternative incisions have been proposed in the literature but have not been compared directly.

Dowlati et al. from MedStar Washington Hospital Center presented the retroauricular (RA) incision as an alternative incision that they hypothesized will increase calvarium exposure to maximize the removal of the hemicranium and will decrease wound-related complications compared to the RQM incision.

Methods: This study is a retrospective review of all DHCs performed at our institution over a span of 34 mo, stratified based on the type of scalp incision. The surface areas of the cranial defects were calculated, normalizing to their respective skull diameters. For those patients surviving beyond 1 wk, complications were examined from both cohorts.

Results: A total of 63 patients in the RQM group and 43 patients in the RA group were included. The average surface area for the RA and RQM incisions was 117.0 and 107.8 cm² (P = .0009), respectively. The ratio of average defect size to skull size for RA incision was 0.81 compared to 0.77 for the RQM group (P = .0163). Of those who survived beyond 1 wk, the absolute risk for surgical site complications was 14.0% and 8.3% for RQM and RA group (P = .5201), respectively.

Conclusion: The RA incision provides a safe and effective alternative incision to the traditional RQM incision used for DHC. This incision affords a potentially larger craniectomy while mitigating postoperative wound complications.

1) Dowlati E, Mortazavi A, Keating G, Jha RT, Felbaum DR, Chang JJ, Nair MN, Mason RB, Aulisi EF,